

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-11 (canceled)

12. (currently amended) An apparatus, comprising:

- a) a backplane, said backplane having a plurality of switch card interfaces and a plurality of adapter card interfaces;
- b) each of said switch card interfaces having an arrangement of inputs/ and outputs in an arrangement that to functionally mates to an ATM switch card and that to functionally mates to a SONET switch card; and
- c) each of said adapter card interfaces coupled to each of said switch card interfaces, each of said adapter card interfaces having an arrangement of inputs/ and outputs in an arrangement that to functionally mates to an ATM adapter card and that to functionally mates to a SONET adapter card.

13. (original) The apparatus of claim 12 further comprising an ATM switch card mated with one of said switch card interfaces and a SONET switch card mated with another of said switch card interfaces.

14. (original) The apparatus of claim 13 further comprising an ATM adapter card mated with one of said adapter card interfaces and a SONET adapter card mated with another of said adapter card interfaces.

15. (currently amended) The apparatus of claim 14 further comprising a hybrid SONET/ATM adapter card mated with one of said adapter card interfaces, each of said adapter card interfaces having an arrangement of inputs/ and outputs that to functionally mate to said hybrid SONET/ATM adapter card.

16. (original) The apparatus of claim 12 further comprising a first ATM switch card mated with one of said switch card interfaces, a redundant ATM switch card mated with another of said switch card interfaces and an ATM adapter card mated with one of said adapter card interfaces.

17. (previously presented) The apparatus of claim 16 wherein said coupling between said adapter card interfaces and said switch card interfaces further comprises a plurality of major links, one major link between each said adapter card and each said switch card, each of said major links further comprising a plurality of minor links, each of said minor links further comprising a real data minor link and a redundant minor link.

18. (original) The apparatus of claim 12 further comprising a first SONET switch card mated with one of said switch card interfaces, a redundant SONET switch card mated with another of said switch card interfaces and a SONET adapter card mated with one of said adapter card interfaces.

19. (previously presented) The apparatus of claim 18 wherein said coupling between said adapter card interfaces and said switch card interfaces further comprises a plurality of major links, one major link between each said adapter card and each said switch card, a real data major link between said SONET adapter card and said first SONET switch card, a redundant major link between said SONET adapter card and said redundant SONET switch card.

20. (original) The apparatus of claim 12 further comprising four said switch card interfaces and twelve said adapter card interfaces.

21. (currently amended) A method, comprising:

forming a first and second backplane according to a manufacturing process;

integrating said first backplane into an ATM system that does not comprise any SONET switch cards, said SONET switch cards capable of only switching SONET traffic, said first backplane to receive ~~an~~ one or more ATM switch cards for use in said ATM system; and,

integrating said second backplane into a SONET system that does not comprise any ATM switch cards, said ATM switch cards capable of only switching ATM traffic, said second backplane to receive a one or more SONET switch cards for use in said SONET system.

22. (original) The method of claim 21 wherein said manufacturing process further comprises forming minor link conducting traces associated with a major link.

23. (original) The method of claim 22 wherein said forming minor link conducting traces further comprises forming a pair of differential transmit conducting traces.

24. (original) The method of claim 23 wherein said forming minor link conducting traces further comprises forming a pair of differential receive conducting traces.

25. (original) The method of claim 21 wherein said manufacturing process further comprises forming system bus conducting traces.

26. (original) The method of claim 21 wherein said manufacturing process further comprises forming clock traces.

27. (original) The method of claim 21 further comprising affixing a card interface to said backplane.

28. (original) The method of claim 27 further comprising affixing an adapter card interface to said backplane.

29. (original) The method of claim 27 further comprising affixing a switch card interface to said backplane.

30. (original) The method of claim 27 further comprising affixing a processor card interface to said backplane.

31. (original) The method of claim 21 wherein said manufacturing process further comprises a lithographic process that employs a mask set.

Claim 32 (canceled)

33. (currently amended) An apparatus, comprising:

a backplane designed to support different ~~from which a pair of~~ networking systems ~~can be implemented~~, said backplane having a plurality of switch card interfaces and a plurality of adapter card interfaces, each of said switch card interfaces having an arrangement of inputs/ and outputs ~~in an arrangement~~ that functionally mates to an ATM switch card and that functionally mates to a SONET switch card, each of said adapter card interfaces coupled to each of said switch card interfaces, each of said adapter card interfaces having an arrangement of inputs/ and outputs ~~in an arrangement~~ that functionally mates to an ATM adapter card and that functionally mates to a SONET adapter card, a first of said networking systems being an ATM system where ATM adapter cards are plugged into said adapter card interfaces and ATM switch cards are plugged into said switch card interfaces, a second of said networking systems being a SONET system where SONET adapter cards are plugged into said adapter card interfaces and SONET switch cards are plugged into said switch card interfaces.

34. (previously presented) The apparatus of claim 33 wherein said backplane further comprises a conductive trace between one of said adapter card interfaces and one of said switch card interfaces, said conductive trace able to transport data

between said adapter card interface and said switch card interface if said first networking system is being implemented, said conductive trace able to transport data between said adapter card interface and said switch card interface if said second networking system is being implemented.

35. (previously presented) The apparatus of claim 34 wherein said backplane further comprises a plurality of conductive traces between one of said adapter card interfaces and one of said switch card interfaces, each of said conductive traces able to transport data between said adapter card interface and said switch card interface if said first networking system is being implemented, each of said conductive traces able to transport data between said adapter card interface and said switch card interface if said first networking system is being implemented.

36. (previously presented) The apparatus of claim 34 wherein each adapter card interface is coupled to each switch card interface by a separate conducting trace that connects each one of said adapter card interfaces to each one of said switch card interfaces, each conductive trace able to transport data between its adapter card interface and its switch card interface if said first networking system is being implemented, each conductive trace able to transport data between its adapter card interface and its switch card interface if said second networking system is being implemented.

37. (previously presented) The apparatus of claim 36 wherein each adapter card interface is coupled to each switch card interface by separate pluralities of

conducting traces that connect each one of said adapter card interfaces to each one of said switch card interfaces, each plurality of conductive traces able to transport data between its adapter card interface and its switch card interface if said first networking system is being implemented, each plurality of conductive traces able to transport data between its adapter card interface and its switch card interface if said second networking system is being implemented.

38. (previously presented) The apparatus of claim 37 wherein each plurality of conducting traces has a redundant conducting trace to transport data to its corresponding switch card interface upon the failure of a switch card that is plugged into a switch card interface other than its corresponding switch card interface.

39. (currently amended) The apparatus of claim 33 wherein said backplane's design can be used to implement support three networking systems, a third of said three networking systems being a hybrid ATM/SONET system having at least one ATM adapter card plugged into a first adapter card interface and at least one SONET adapter card plugged into a second adapter card interface, said hybrid ATM/SONET system having at least one ATM switch card plugged into a first switch card interface and at least one SONET switch card plugged into a second switch card interface.

40. (previously presented) The apparatus of claim 39 wherein a hybrid ATM/SONET adapter card may also be plugged into: 1) said first adapter card

interface in place of said ATM adapter card; or, 2) said second adapter card interface in place of said SONET adapter card; or, 3) a third adapter card interface.

41. (previously presented) The apparatus of claim 33 wherein said backplane further comprises a processor card interface, said processor card interface coupled to said switch card interfaces and said adapter card interfaces.

42. (previously presented) The apparatus of claim 41 wherein said processor card interface is said coupled to said switch and adapter card interfaces with a bus

43. (previously presented) The apparatus of claim 41 wherein said processor card interface is said coupled to said switch and adapter card interface with a clock trace.

44. (previously presented) The apparatus of claim 43 wherein a processor card that plugs into said processor card comprises system clocking circuitry.

45. (new) An apparatus, comprising:

a backplane for supporting different networking systems, said backplane having means for making electrical contact with a switch card, said backplane having means for making electrical contact with an adapter card, said means for making electrical contact with a switch card further comprising functional mating means that functionally mate to an ATM switch card and that functionally mate to a SONET switch card, said means for making electrical contact with an adapter card further comprising functional mating means that functionally mate to an ATM adapter card

and that functionally mate to a SONET adapter card, a first of said networking systems having an ATM adapter card that is functionally mated with said means for making electrical contact with an adapter card and an ATM switch card that is functionally mated with said means for making electrical contact with a switch card, a second of said networking systems having a SONET adapter card that is functionally mated with said means for making electrical contact with an adapter card and an SONET switch card that is functionally mated with said means for making electrical contact with a switch card.

46. (new) The apparatus of claim 45 wherein said backplane further comprises means for transporting data between said means for making electrical contact with a switch card and said means for making electrical contact with an adapter card.

47. (new) The apparatus of claim 45 wherein said backplane further comprising means for transporting data to a second switch card if a first switch card fails.

48. (new) The apparatus of claim 45 wherein said backplane is designed to support three networking systems, a third of said three networking systems being a hybrid ATM/SONET system having at least one ATM adapter card functionally mated with a first instance of said means for making electrical contact with said switch card and a SONET adapter card functionally mated with a second instance of said means for making electrical contact with said switch card.

49. (new) The apparatus of claims 48 wherein said third networking system is to have at least one ATM switch card functionally mated with a first instance of said means for making electrical contact with a switch card and is to have at least one SONET switch card functionally mated with a second instance of said means for making electrical contact with a switch card.

50. (new) The apparatus of claim 48 wherein said backplane further comprises means for functionally mating with a processor card.